

CLAIMS

We claim:

1. A composition of matter comprising
a) a polyol component comprising at least one polyoxyalkylene polyether polyol,

and

b) an additive comprising
1) a mixture of

polyethylene and
PTFE

wherein said mixture has a density from greater than 0.97 to about 1.1 times the density of the polyol component.

2. The composition of matter of claim 1 wherein said mixture has a density from about 1.0 to about 1.1 times the density of the polyol component .

3. The composition of matter of claim 1 wherein said mixture comprises particles having a maximum particle size of less than 125 microns.

4. The composition of matter of claim 1 wherein said mixture comprises particles having a mean particle size from about 1 microns to about 25 microns.

5. The composition of matter of claim 1 wherein said mixture comprises a homogeneous blend of said polyethylene and PTFE.

6. An additive for a polyol component useful in making polyurethane comprising:

at least one polyoxyalkylene polyether polyol and

a mixture comprising

polyethylene and

PTFE

wherein said mixture has a density ranging from greater than 0.97 to about 1.1 times the density of the polyol component; and .

the ratio of the at least one polyoxyalkylene polyether polyol to the mixture is from about 1:1 to about 1:10.

7. The additive of claim 6 wherein the mixture is present in amounts ranging from 0.1 to 12 weight percent based on the total amount of the at least one polyoxyalkylene polyether polyol.

8. The additive of claim 6 wherein said mixture has a density ranging from about 1.0 to about 1.1 times the density of the polyol component .

9. The additive of claim 6 wherein said mixture comprises particles having a maximum particle size of less than 125 microns.

10. The additive of matter of claim 6 wherein said mixture comprises particles having a mean particle size ranging from 1 to 25 microns.

11. The additive of claim 6 wherein said mixture comprises a homogeneous blend of said polyethylene and PTFE.

12. An additive for an polyisocyanate component useful in making polyurethane comprising:
an organic polyisocyanate or organic polyisocyanate prepolymer and
a mixture comprising

polyethylene and

PTFE

wherein said mixture has a density ranging from greater than 0.97 to about 1.1 times the density of the polyisocyanate component.

13. The additive of claim 12 wherein the mixture is present in amounts from 0.1 to 12 weight percent based on the total amount of the polyisocyanate component.

14. A polyurethane foam composition comprising the reaction product of:

A. an organic polyisocyanate;

B. an isocyanate reactive composition comprising one or more vinyl polymer grafted polyoxyalkylene polyether dispersions or polyoxyalkylene polyether polyols; in the presence of

C. a urethane promoting catalyst;

- D. a blowing agent;
- E. an additive comprising
 - 1) a mixture of polyethylene and PTFE, and
 - 2) optionally, a carrier comprising a polyoxyalkylene polyether polyol or an organic polyisocyanate, and
- F. optionally, surfactants, fillers, pigments, antioxidants, and stabilizers.

15. The foam of claim 14 wherein the additive is present in an amount of from about 0.1 to about 10 weight percent based on the sum of the weights of components of B.

16. The foam of claim 14 wherein said mixture has a density ranging from greater than 0.97 to about 1.1 times the density of B.

17. The foam of claim 16 wherein said mixture has a density ranging from about 1.0 to about 1.1 times the density of B.

18. The foam of claim 14 wherein said mixture comprises particles having a mean particle size ranging from 2 to 25 microns.

19. The foam of claim 14 wherein said mixture comprises a homogeneous blend of said polyethylene and PTFE.

20. A molded integral skin polyurethane article having enhanced abrasion resistance which is obtained by

- a) providing an organic polyisocyanate A);
- b) providing an isocyanate reactive hydroxyl functional polyol composition B)

comprising:

- (i) one or more polyoxyalkylene polyether polyols, vinyl polymer grafted polyoxyalkylene polyether dispersions or mixtures thereof;
- (ii) a chain extender having two functional groups bearing active hydrogen atoms;
- (iv) a urethane promoting catalyst; and
- (vi) optionally, surfactants, fillers, pigments, antioxidants, and stabilizers;

c) providing an additive C) comprising

- (i) a mixture of polyethylene and PTFE, and
- (ii) optionally, a carrier comprising a polyoxyalkylene polyether polyol or an organic polyisocyanate and

d) adding C) to A) or B);

e) introducing A) and B) into a mold; and

f) reacting A) and B) in the presence of a blowing agent F) for a period of time sufficient to produce a molded integral skin polyurethane foam.

21. The article of claim 20 wherein the additive is present in an amount of from about 0.1 to 12 weight percent based on the sum of the weights of components of B.

22. The article of claim 20 wherein blowing agent F) is either 1,1,1,2-tetrafluoroethane, water or a mixture thereof.

23. The article of claim 20 wherein said mixture has a density ranging from greater than 0.97 to about 1.1 times the density of B.

24. The article of claim 20 wherein said mixture has a density ranging about 1.0 to about 1.1 times the density of B.

25. The article of claim 20 wherein said mixture has a maximum particle size of less than 125 microns.

26. The article of claim 20 which is a shoe sole.

27. A polyurethane foam shoe sole having enhanced abrasion resistance which is obtained by

a) providing an organic polyisocyanate A);

b) providing an isocyanate reactive hydroxyl functional polyol composition B)

comprising:

(i) one or more polyoxyalkylene polyether polyols, vinyl polymer grafted polyoxyalkylene polyether dispersions or mixtures thereof;

(ii) a chain extender having two functional groups bearing active hydrogen atoms;

(iv) a urethane promoting catalyst; and

(vi) optionally, surfactants, fillers, pigments, antioxidants, and stabilizers;

c) providing an additive C) comprising

- (i) a mixture of polyethylene and PTFE, and
- (ii) optionally, a carrier comprising a polyoxyalkylene polyether polyol or an organic polyisocyanate and

d) adding C) to A) or B);

e) introducing A) and B) into a mold; and

f) reacting A) and B) in the presence of a blowing agent F) for a period of time sufficient to produce a molded polyurethane foam shoe sole.

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